

Title	Demonstrate knowledge of and conduct pigging activities in an energy and chemical pipeline		
Level	3	Credits	3

Purpose	People credited with this unit standard are able to: demonstrate knowledge of pigging, and load a pig into a launcher in a pipeline; launch a pig into a pipeline; receive a pig in a pipeline; and unload a pig from a pig receiver in a pipeline, reinstate the receiving system, and record and report findings.
----------------	---

Classification	Energy and Chemical Plant > Operation of Energy and Chemical Plant
-----------------------	--

Available grade	Achieved
------------------------	----------

Guidance Information

- 1 Legislation relevant to this unit standard includes but is not limited to:
 - Health and Safety at Work Act 2015;
 - Health & Safety at Work (Hazardous Substances) Regulations 2017 (HSWA);
 - Resource Management Act 1991;
 - and any subsequent amendments.

- 2 Definitions

Energy and chemical plant may be in – petrochemical, agri-nutrient, power generation, dairy processing, meat processing, and wood fibre manufacturing, or other plants that operate with a combination of high temperatures, pressures, steam and/or chemicals in gas, liquid or solid form.

Organisational requirements – documented policies and procedures. These may include: equipment manufacturers’ procedures; plant procedures; suppliers’ instructions; site signage; codes of practice; company health and safety plans; on site briefings; and supervisor’s instructions. This includes all regulatory and legislative obligations that apply to the plant.

Plant – the operational unit, equipment and/or workplace at which the person is working.

Pig refers to pipeline internal gauges. Pigs are devices for insertion into pipelines for the purpose of cleaning the lines or separating products.

- 3 For the purposes of assessment:
 - evidence for the practical components of this unit standard must be supplied from the workplace.
 - evidence for all outcomes must be presented in accordance with organisational requirements.
 - this unit standard relates to pipelines that carry liquid or gas petrochemicals. It excludes the pigging of pipelines for other liquid or gas products.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of pigging, and load a pig into a launcher in a pipeline.

Performance criteria

- 1.1 Describe the reasons for using pigs.
- Range cleaning, purging, product separation, clearing blockages, pipeline condition analysis.
- 1.2 Identify pig types in terms of application and site pigging requirements.
- Range displacement, bi-directional, intelligent, conical cup, gauging, batching (single or multiple), spherical, wire brush, scraper.
- 1.3 Identify hazards in relation to the interruption of pipeline flow.
- Range stuck pig, block valve closure, reduced flow rates, process interruption.
- 1.4 Load the pig and seat into neck of the launcher safely.
- Range launcher valves are confirmed closed, pressure vented from launcher, zero pressure confirmed, launcher door opened standing clear of open end, visual inspection of door seal.

Outcome 2

Launch a pig into a pipeline.

Performance criteria

- 2.1 Carry out pig launching system checks.
- Range visual inspection of threads and pressure bleed valves, pressure isolations, signalling/tracking equipment, quick opening enclosure, door closed, line valves are confirmed open, check for leaks.
- 2.2 Launch the pig into the pipeline safely.
- 2.3 Maintain communication relating to the process with relevant personnel prior to and during the pig launching operation.
- Range control room operator, operations and maintenance personnel, external customers.
- 2.4 Reinststate the pig launching system.

Outcome 3

Receive a pig in a pipeline.

Performance criteria

3.1 Carry out pig receiving system checks.

Range visual inspection of threads and pressure bleed valves, pressure isolations, signalling/tracking equipment, quick opening enclosure, line valves are confirmed open, check for leaks.

3.2 Receive the pig and safely depressurise and drain the pig receiver.

3.3 Maintain communication relating to the process with relevant personnel during pig receiving operations.

Range control room operator, operations and maintenance, external customers.

Outcome 4

Unload a pig from a pig receiver in a pipeline, reinstate the receiving system, and record and report findings.

Performance criteria

4.1 Carry out pig unloading system checks.

Range pressure, isolations, catchment, signalling/tracking equipment, safety equipment.

4.2 Unload the pig safely and without spillage.

Range receiver valves are confirmed closed, zero pressure confirmed, catchment equipment in place, receiver door opened standing clear of open end, visual inspection of door seal, pig unloaded and inspected, receiver door and vents/drains closed.

4.3 Reinstall the pig receiving system.

Range receiver door seal cleaned and lubricated, receiver door closed, vents/drains closed, waste disposed of, check for leaks.

4.4 Record and report findings to relevant personnel.

Range condition of pig, analysis of debris, reports, follow-up actions.

Planned review date	31 December 2025
----------------------------	------------------

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	6 February 1997	31 December 2018
Revision	2	3 August 2000	31 December 2018
Review	3	24 January 2002	31 December 2018
Review	4	20 February 2009	31 December 2018
Rollover and Revision	5	20 April 2017	31 December 2022
Review	6	27 February 2020	N/A

Consent and Moderation Requirements (CMR) reference	0079
--	------

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact the Primary Industry Training Organisation standards@primaryito.ac.nz if you wish to suggest changes to the content of this unit standard.